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**Final Internal Evaluation
Estonia Dairy Improvement
through Private Extension**

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TABLE OF CONTENTS

	<u>Page</u>
SUMMARY: FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	1
FINAL INTERNAL EVALUATION	
ESTONIA DAIRY IMPROVEMENT THROUGH PRIVATE EXTENSION	3
I. Purpose of evaluation	3
II. Methodology	3
III. Highlights of Interviews	4
A. Interviews in the United States	4
B. Interviews in Estonia	5
IV. Evaluation Findings, Conclusions and Recommendations	8
A. Overview	8
B. Project Design	9
C. Project Impact	12
1. Private advisory services	13
2. Improvement of sanitation on farms and in processing plants	14
3. Better marketing capabilities through better quality products	15
4. Strengthened capability of Estonian Institutions	16
D. Monitoring and Evaluation Systems	17
E. Actions taken on recommendations of mid-term evaluation	18
1. Development strategy	18
2. Training courses	18
3. Technical assistance	18
4. Evaluation and monitoring systems	19
V. Lessons learned	19
A. The role of competition	19
B. Lack of credit	20
Appendices	
Scope of Work	
Documents Reviewed	
Interviews Conducted	

SUMMARY: FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The internal final evaluation was conducted to assess the extent to which Land O'Lakes has achieved the objectives of the Estonia Dairy Improvement project under a regional project titled Agricultural Cooperative/Business Development and Training (EUR-0024-G-00-1072-00) funded by the United States Agency for International Development. The evaluation utilized a methodology which included interviews with Land O'Lakes staff at its headquarters and in-country; site visits to key collaborators in Estonia and a review of project documentation.

The project strategy was designed to increase the ability of the Estonian private sector to compete in the free marketplace. The primary focus was on improving raw milk quality by establishing private extension services from the processors to their producers. Interviews conducted in Estonia revealed that both producers and processors viewed the focus on private extension to have the greatest impact on dairy product quality. Land O'Lakes selected four strategic partners to serve as models for the industry. These dairies recognized the value of extension in producer loyalty and milk quality. Each has staff whose responsibilities include advising producers on herd health and sanitation issues. They expect that services to producers will increase as the dairy industry stabilizes.

A strong focus of the project was on developing sustainable linkages between processors, producers and existing Estonian institutions which support the dairy industry. Representatives of several institutions in Tartu were active participants in training seminars and have incorporated Land O'Lakes' materials and methodology into their curricula. There are plans in place to continue extension activities started by Land O'Lakes under the project.

The evaluation determined the following successes as the result of the technical assistance provided during the project:

- Three of the four collaborating dairies will continue to have staff whose responsibilities include advising producers on herd health and on-farm sanitation. The management credits the program with direct impact on improvement of milk quality and producer loyalty. The advisors conducted training directly for their large producers and reached small producers by training their milk haulers. They reported that they spend at least three days a week on farm visits working directly with the producers.
- Two of the collaborating dairies provide credit against milk checks for the purchase of cooling equipment and replacement animals. One of the dairies stated that it guaranteed the loans from a bank and was able to negotiate a more favorable interest rate which was passed on to the producers.
- One processor is introducing a new packaging line for its consumer products to establish brand identity in the market. The design was done by a private Estonian advertising agency.
- An instructor at the School of Dairy Technology has incorporated Land O'Lakes' materials into her lectures. She stated that her students found the materials "easy to understand, black and white, clear to read the English—not like a textbook."

- Land O'Lakes developed and published a newsletter which the local staff and advisors wrote to provide producers with technical information. The Estonian Advisory Association will continue to publish this newsletter funded by the dairy processors and distributed by their advisors.
- One producer reduced the somatic cell count in his milk from 400,000 ppm to under 220,000 ppm as a result of technical assistance about mastitis treatment. Prior to Land O'Lakes' help, no one ever told him how and when to treat infected cows. Within four months of receiving assistance, the quality of his milk improved to Grade A.
- The Animal Recording Centre used Land O'Lakes' materials to train 55 farmers from two counties in which Land O'Lakes does not have direct collaborators. The local dairy processors provided funds for the materials and training sites.
- A seminar for 70 veterinarians gave an instructor at the School of Dairy Technology the opportunity to present information about antibiotic residues in milk. This was the first time that someone from the School has worked directly with veterinarians. The veterinarians now know how to advise their producers to segregate the treated cows longer to protect their milk from being commingled with contaminated milk. This would result in the sale of antibiotic-free milk only to the processors.

The evaluation found that the approach taken by the project was the most appropriate to improve product quality with sustainable effect. It is recommended that the private extension model be used in future project design where similar milk quality problems exist. Recommendations to improve the project design in the future include the following:

- Consider the inclusion of a U.S. in-country project manager for at least the start-up of the project.
- Gain support of senior management of the local collaborators early in the project by providing them with direct exposure of the U.S. agricultural system.
- Provide training for the advisors as soon as practical following the management training.

In designing and implementing this project, Land O'Lakes did respond to recommendations of the mid-term evaluation conducted on the regional program in September, 1993. The program was focused on country-specific issues and was implemented primarily by long-term technical specialists in the field. The training seminars which were presented were short and followed by targeted technical assistance to the collaborating processors.

The evaluation system recommended in the mid-term evaluation was implemented as part of this project. Formal evaluation interviews were conducted on a scheduled basis during the life of the project. Land O'Lakes could strengthen its evaluation system by conducting a staff workshop at the beginning of the project to review the underlying documents of the project, the evaluation process and the key measurements for progress reports. As new team members are added, they should become familiar with the evaluation process and the contents of the key project documents.

FINAL INTERNAL EVALUATION ESTONIA DAIRY IMPROVEMENT THROUGH PRIVATE EXTENSION

I. Purpose of evaluation

Land O'Lakes is implementing a regional project in Central and Eastern Europe titled Agricultural Cooperative/Business Development and Training (EUR-0024-G-00-1072-00) supported by funding from the Bureau for Europe and the New Independent States of the United States Agency for International Development (USAID). Initially approved in the amount of \$4 million in 1991, the grant has been amended twice for a total of \$13 million. The focus of this evaluation is the country-specific component implemented in Estonia from January, 1994 through May, 1995. Program costs for the activities under this project were approximately \$560,000.

The purpose of this evaluation was to assess the extent to which Land O'Lakes has achieved the objectives of the Estonia Dairy Improvement project. The project goal was to assist the Estonian private dairy industry to compete better within the evolving free marketplace. The intent of the evaluation was to measure the project against expected outputs of the project design including the establishment of model private extension services, improvements of sanitation on farms and in plants, better marketing capability through better quality products and strengthened capability of Estonian institutions.

This evaluation is intended to provide USAID and Land O'Lakes with evidence of the project's impact on the Estonian dairy industry, feedback on the success of the project's methodology, recommendations for follow-on activities, and lessons learned which can be incorporated into future project design.

II. Methodology

The evaluation methodology utilized to conduct the project assessment included:

1. One-on-one interviews with key home office staff.
2. Interviews with U.S. providers of technical assistance.
3. Field visits in Estonia to dairy processing plants, farms, and local collaborating institutions.
4. Interviews with staff members of the four key processors and selected farmers.
5. Interviews with Land O'Lakes field staff and USAID staff.
6. Meetings with key collaborators.
7. Review of project documents including USAID agreement, preceding evaluation, technical assistance providers' reports, quarterly and annual reports of the project and logframes.

III. Highlights of Interviews

A. Interviews in the United States

The evaluator conducted interviews at Land O'Lakes' headquarters with staff responsible for implementation of the project and technical specialists who had provided training and technical assistance in Estonia during the past two years.

The U.S. project officer indicated that the project design worked well overall. The successes in the program were achieved by building on what already existed in Estonia, such as the genetic potential of the Estonian dairy herd, the recordkeeping already in place and available to dairy producers and institutions already active in the dairy sector. There was more focus on working with producers to improve milk quality than on improvements by the processing plants. Because of processing over capacity, competition between processors for raw milk created an incentive for the processors to focus on their relationships with producers.

Considerable time was spent building trusting relationships with plant management. In some cases, the geographic concentration of the recipients created fear that information would be shared with competitors. Had the project continued for an additional six months as originally designed, technical assistance to individual processors would have resulted in more technical and marketing changes.

One staff member noted that one significant achievement of the project was to establish a team approach to milk quality. Land O'Lakes' in-country manager initiated monthly meetings with individual farmers, staff advisors from the processing plant, Land O'Lakes local staff and the farmer's veterinarian. The meetings brought the technical resources together to assist the farmers jointly in problem solving and improvements on farm. This approach was successful in creating linkages that did not exist previously.

The evaluator interviewed a Land O'Lakes' milk procurement manager who provided training/technical assistance twice in Estonia and trained Land O'Lakes local staff veterinarian in the U.S. In his opinion, the groundwork for improvement was set. Land O'Lakes local staff had the information needed to train producers and milk handlers. A significant barrier to improvement is the lack of government raw milk quality regulations. In the absence of consistent legal standards, processing over capacity will allow raw milk which has high bacterial counts, antibiotic residues and other contaminants to enter the processing system. As long as one plant would take milk with antibiotics, the industry cannot support a higher standard.

A Land O'Lakes' quality assurance expert interviewed by the evaluator noted a significant change in attitude between his first assignment in Estonia in 1992 and a later assignment in 1994. On the initial trip, the processors asked for financial resources to do what they considered important without outside assistance. During the later assignment, the same processors admitted to implementing some of his original recommendations and were eager to continue the partnership with Land O'Lakes. He noted that the concept of ongoing equipment maintenance had been embraced by two of the most successful plants with whom he worked. He was asked by one of the plants to return in two years to introduce the concepts of ISO9000 which the processors recognize they need to incorporate into their operations to achieve a world market presence.

Although the Land O'Lakes' project will have formally ended, he would like to continue to support the processors personally. In fact, he feels so strongly about the relationships he has established and the assistance he can provide that he is considering going back on his own after he retires from Land O'Lakes in a few years.

A veterinarian fielded by Land O'Lakes to provide training and technical assistance stated during an interview that the Estonians he met were "as good or better cattle people as his U.S. clients". Although equipment is out of date, the farmers have done a good job of adapting. The farmers he worked with embraced the concept of grouping cows based on somatic cell counts recorded in the official herd records maintained by a government testing agency. The grouping kept the poor quality milk from mastitis-infected cows from diluting the overall milk quality of the herd. This sorting resulted in more premium milk and higher milk checks. The herd records had previously been used only for animal breeding. This was recognized by the producers as a herd management tool which is based on existing data at no additional cost to them.

B. Interviews in Estonia

Interviews were conducted with Land O'Lakes local staff members and project manager; USAID representative and project officer; the Vice Chancellor of the Ministry of Agriculture. Beneficiaries of the project who were interviewed included five advisors from four private processing plants; management staff from three processing plants; three private farmers and a nutrition advisor who consults with private farmers. Collaborators from a number of organizations were interviewed including the Director of the Animal Recording Centre, the Dean of the Estonian Veterinary College, the Dean of the School of Dairy Technology, and an instructor of the Dairy Institute.

The interview of the Director of the Animal Recording Centre revealed a strong collaborator in milk quality improvement. The Animal Recording Centre is the state-owned agency which keeps statistical data on the registered Estonian dairy herd. The agency supports the use of its data for tracking animal health and milk quality. The director stated that "Land O'Lakes' program came just as a new computer system was put in place and milk quality standards were changing. This was great timing for maximum impact." Sixty-five percent of all cows in Estonia are on milk recording. The agency has added a staff nutritionist and plans to add advisors for equipment and milk quality/herd health. The Centre is currently in negotiations with one of Land O'Lakes' local staff members to be hired as the milk quality/herd health specialist. The Director and the Centre's bookkeeper attended a Land O'Lakes' financial planning course. She stated that "the course provided her with self-confidence that she was doing things the right way. The bookkeeper now knows how to do financial analysis which frees me (the Director) up to make decisions." She also learned the process of aging receivables which has given her a structure to establish credit standards. She was able to collect back payments which had been written off. The resulting net gain in 1995's budget resources allowed her to offer additional services to farmers.

One of the plant advisors trained by Land O'Lakes in the U.S. stated that the training showed her that decisions are made from the point of view of milk quality. She saw that farms do not have to be big operations to be successful. This experience could be applied in Estonia by farmers setting up small milking parlors without great capital spending. The plant has exchanged some of its aluminum milk trucks for stainless steel based on recommendations made by a Land O'Lakes expert.

The manager of the milk supply department of a dairy stated that he started working with Land O'Lakes in 1994. After taking part in the seminars, he was sorry that he and the staff had missed some of the past seminars. The most important part of the Land O'Lakes' program is that "it is the most to the point of all programs. They work with all specialists in addition to the advisors. Land O'Lakes knows how to solve definite problems." He credits producer loyalty to prompt payments, using the same payment schedule for large and small producers, offering services free of charge, delivery of cleaning supplies and help with getting cooling equipment. This dairy has financed 215 cooling tanks for small producers with payments from milk checks.

Another plant advisor who participated in the U.S. training stated during the interview that he learned the ways in which Land O'Lakes integrated its business to supply farmers with what they need to produce quality milk. This dairy has increased its farm supply business to serve its producers. The impact of the training on his work is that he now can see things as they are. He acts "as the family doctor for farmers, he must treat everything." In his words, "Land O'Lakes' program has been the most concrete, to the point and the best."

Discussions with the Commercial Manager at a large dairy processing plant revealed that they have made significant changes in marketing products. Currently the plant exports more than 50% of its production. Five years ago, it marketed only in its county. Now its market share has increased with the main domestic markets of Tallinn and Tartu. It has just introduced a new soft cheese product which was selected to capture a niche that is unfilled. This product was identified as a possible market entry because there is no domestic or foreign competition for a product of this type. The product has a new package which is the front runner for a total line packaging change to establish brand identity.

One processor has a successful farm supply store which had sales of 4.3 million EEK last year. It purchases goods from 70 suppliers of inputs as a service to farmers. It operates with a 10% markup to cover operating costs. Sales have continued to increase with a significant increase following the changes in milk grading regulations. The manager of the store expects sales in June of 1 million EEK versus sales last July of 560 thousand EEK. He credits the sales increase to higher milk prices and awareness of on-farm practices. The staff of the store include a nutritionist and two veterinarians. They furnish the farmers with information on herd health and milk handling including the Land O'Lakes' newsletter which is widely read. The processors consider the access to inputs which the store supplies as a service which builds and keeps producer loyalty. It is currently the only one in Estonia but plans are in place for two more private processors to open similar stores. The manager stated that he welcomed the addition of new stores because their store is not profit-oriented and cannot meet the demand. He hopes that they may be able to purchase fertilizer cooperatively to get the best price.

A progressive farmer who is also on the board of directors of the local processing plant credits Land O'Lakes with teaching him new methods of communication for his private extension work. He has been innovative in his on-farm practices and shares his findings with other farmers. He developed a formal presentation based on his training at Land O'Lakes using overhead transparencies of pictures of his farm and milk-handling methods. If farmers are unable to come to his farm for tours, he presents these materials to groups of farmers at their location. He has also established a mutually beneficial relationship with the Estonian Agricultural University. Students work on his farm in the summer and other students designed his barn using the existing foundation and wood from the farm. The only new materials were for the roof. He passes on the

results of his progressive practices whenever possible to demonstrate what can be done with new ideas and minimal resources.

One dairy processing plant manager stated that their most significant advantage in the competitive market is being honest with producers. He credits the extension services provided by his advisors as key to producer loyalty. The information provided will make the farmers more competitive and increase quality. The Land O'Lakes' system of combining businesses has influenced the plant management to plan to open a farm shop in 1996 and facilitate loans for farmers. Farmers' interest in milk quality has increased. This is evidenced by the increase in the work load in the lab where farmers often bring samples from all of their cows. Farm loans for cows and milking equipment have been facilitated by providing loan guarantees to the bank. They currently have 20-30 loans to farmers and see this as another service to improve the competitiveness and loyalty of producers.

A Master's student from the Estonian Agricultural University is preparing her master's project based on collaboration with Land O'Lakes local staff on mastitis control. The Dean of the Veterinary Faculty views her paper as very valuable as an example from real life in Estonia. He credits Land O'Lakes with helping this student, the University and the dairy industry by providing the opportunity to formalize this knowledge.

An instructor at the School of Dairy Technology participated in the development of a Land O'Lakes' seminar for veterinarians and spoke to the group during the seminar. This was the first time she was able to address practicing veterinarians about her specialty, which is antibiotic residues in milk. She gave practical information beyond what is on antibiotic labels regarding the testing and segregation of treated cows. She also uses Land O'Lakes' materials in her classroom. Students find the materials "easy to understand, black and white, clear to read the English - not like a textbook."

As a result of demand and training received from Land O'Lakes, a university lecturer/researcher decided to become a full time consulting advisor. Under the Soviet system, the collective farms had specialists. In his view, these services are no longer available to farmers and the farmers need help. He attended a Land O'Lakes' training of trainers class in 1993, U.S. training for advisors and training in teaching adult learners. While in the United States he saw the value of extension services. He now has more information than feed formulations to share with farmers when he works with them. If he sees mastitis problems, he will discuss solutions with the farmers and follow up on next visits. He received requests from all over Estonia for his services.

A manager of a dairy processing plant indicated that farmers have a changed attitude about milk quality, cleaning and antibiotics. They now know what needs to be done to improve. Thanks to specialists from Land O'Lakes the advisors are trained in milk handling and mastitis treatment. The producers are no longer waiting for invitations for information; they call for advice. There is still a need for trained specialists, as the advisors can't know everything. The plant has started selling supplies to the producers and would like to reach the stage where they can supply all needs to the farmers like he saw at Land O'Lakes.

A dairy processing plant worked with an Estonian advertising agency to design all new packaging for its products which will be introduced in June. Currently, all Estonian packaging looks the same. Competition in the market forced them to make these changes to be recognized by consumers in the market.

The president of the Estonian Dairy Association (EDA), a member organization of 27 dairy processors, is concerned about the lack of raw milk regulations. Without standards and a system to check milk quality, it is very difficult for processors to meet export trade standards. He sees the export trade as critical to the future of the dairy industry. The EDA has developed 24 regulatory standards based on the model of EU regulations which it would like to see put into law. Although the members of the EDA find it difficult to cooperate on many issues because of the competition between members, some collaborate on common issues like these standards.

The USAID representative in Tallinn indicated satisfaction with the performance of Land O'Lakes' in its implementation of this project. He stated that Land O'Lakes has one of the best agricultural programs. In his view, one strength of the program is the ongoing contact with Land O'Lakes that is possible after its country presence is concluded.

IV. Evaluation Findings, Conclusions and Recommendations

A. Overview

The dairy industry in Estonia is dynamic and still relatively unstable. Since the evaluation in 1993, majority ownership in all dairy plants has been shifted to the private sector. However, the government's minority ownership in some plants is still in the process of privatization. Uncertainty about future ownership of these shares is a concern. For example, the 49% government ownership in one plant will go up for auction in June. Management requested that the government allow producers to have preference in the auction process. This request was denied. As a result, management has no idea who the new owners will be and what impact on the plant and its management will result from the restructuring. This uncertainty has put necessary management decisions on hold until ownership is resolved. Rationalization of the over capacity is starting to occur with several plants on the verge of closing. Management of processing plants is focusing on improvements necessary to remain viable as downsizing pressures the industry.

The previous evaluation noted raw milk quality as the major constraint to improved product quality. At that time, although plant management recognized the need to work with the producers, they had little interaction with producers other than to buy milk. Generally, the perception was that raw milk quality is the producers' problem. There has been a noticeable shift in the processors' relationship with producers. Linkages between processors and producers are much stronger than in 1993. Every plant manager interviewed noted support to the producers as a major reason for producer loyalty in a situation of shrinking milk supply. Plants which have focused on milk procurement and product quality are emerging as leaders.

Competition in the industry is increasing as evidenced by the number of European firms selling consumer products in the market and investing in the industry. Local competition for milk supply between processors is increasing as plant efficiencies are necessary to compete with lower subsidized European prices. A greater awareness of the need for value-added products and brand identity has emerged as Estonian processors try to compete with the quality and breadth of European products. A major Finnish dairy cooperative is implementing a comprehensive milk procurement system in anticipation of a processing plant start-up in six months. This market entry is starting to put pressure on the local processors, particularly the huge plants which are unable to secure sufficient milk to run their plants profitably.

The total number of cows in the national herd has continued to fall as small subsistence farmers are forced out of business. Although milk is procured from large numbers of small producers, the majority of milk processed by the dairy processors interviewed comes from large producers with 200 cows or more. The processors' efforts to reach producers with information and services are targeted on the large producers. However, small producers have access to the advisors for information and milk haulers are trained to provide information to farmers on their routes. The processors interviewed confirmed that the small producers were paid on the same schedule and the same standards as large producers.

The average price of milk in Estonia has risen to a level which approaches world prices. As a result, prices received for raw milk are about as high as producers can expect. In January, 1995, milk quality regulations set grading standards in line with standards of the European Union. These standards specify lower somatic cell and bacterial counts than previously required. The standards have resulted in a strong financial incentive to improve raw milk quality. Processors noted an immediate decline in the percentage of the top two grades of milk which they received after the change in standards. They now report that producers have improved milk quality to equal or exceed the former percentages of top quality milk they produced. The combination of high prices paid for quality milk and an insufficient milk supply have created an environment which favors the efficient producer. The best producers are focusing on improving management practices to lower production costs and increase the quantity and quality of milk they produce. Producers see the lack of capital to add/replace milking and cooling equipment and to purchase replacement heifers as the major constraint to improving their economic status.

The Estonian government continues to let free enterprise dictate prices and products in the market. Despite dairy processors' requests for market protection, the government neither has put import controls in place nor is it likely to do so. Producers believe that lack of capital is a problem that the government should address through subsidizing the price of raw milk to improve their profitability. Again, the government is not inclined to interfere in the free market by subsidizing producers. The Ministry of Agriculture sees quality as the key to success in the industry. In the Ministry's view, the biggest problems to be addressed by the industry are management, lack of credit, packaging and over capacity. The government is positioning to include provisions to continue extension programs to address quality improvements under a World Bank loan package currently being negotiated.

B. Project Design

In early 1994 Land O'Lakes initiated the project strategy designed to increase the ability of the Estonian private sector to compete in the free marketplace. The primary focus was on improving raw milk quality by establishing private extension services from the processors to their producers. In addition, the project was designed to improve sanitation on farms and in plants, improve marketing capability through better quality products and strengthened capability of Estonian institutions.

The evaluation found that the focus of the project was on target for the needs of the industry. The pressure of European competition in the market and local competition demanded improvement in milk quality. The intention of the project was to start with on-farm improvements and expand to issues related to the processors. Interviews conducted by the evaluator revealed

that both the producers and processors supported the project focus on private extension to have the greatest impact on dairy product quality.

The evaluation reviewed the selection process used by Land O'Lakes to identify the four targeted collaborating dairies. The Land O'Lakes team conducting the selection was composed of Land O'Lakes U.S. project officer, Land O'Lakes technical advisor, Land O'Lakes local staff and two representatives of USAID/Estonia. The criteria used were 1) financial and managerial stability of the plant, 2) progressiveness of management, 3) management's willingness to commit resources needed to start up and sustain the private extension system, 4) the dairy's relationship with its farmers, 5) willingness to serve as a model, and 6) private or privatizing. The criteria were appropriate to the goals of the project.

Four dairies were selected of the nine interviewed. The dairies selected were in the same geographic area but represented different organizational structures and size. Two of the dairies were joint stock companies with large capacities and excellent relationships with producers. A third plant was state-owned and on the list for privatization. It was one of the largest in Estonia and open to assistance. The fourth dairy selected was a small private cooperative with inexperienced management eager to receive technical assistance.

The other five dairies did not meet the selection criteria. Two of these dairies were satellites of the large state plant which was selected and would be indirect beneficiaries. A further two were rejected because they were too small for consideration. The ninth dairy interviewed was not interested in being included in the program.

Assessing the performance of the four dairies at this time yielded varied levels of success. Of the four dairies, three remained active throughout the entire project. The small cooperative was not able to fully commit resources to the advisory services because of financial difficulties and inconsistent management. This dairy was unable to pay its producers on a timely basis and as a result lost its milk supply. At that time, another dairy was added to the project to replace it. During the interview, the new partner expressed regret that it had declined participation in the project when approached in 1993. They initially had declined to participate because they did not believe that Land O'Lakes could be trusted to keep information confidential among the four dairies. The manager of the dairy's milk supply department stated that they were sorry that they missed the earlier training and credited Land O'Lakes local staff with encouraging them to support the producers with advisory services.

Competition in the industry played a significant role in shaping the effectiveness of the project. The processors responded to strong European competition by focusing on the need for government intervention to equalize prices in the market and the need to export their products. While continuing to request policy changes, they now recognize that the government is unlikely to intervene with duties or subsidies and are looking for ways to stimulate exports. The processors recognize that improving quality and decreasing costs are necessary to participate in export markets. Two of the collaborating processors rely on export markets for at least 50% of their products. They were strong advocates of creating linkages with producers to improve milk quality as competition for milk which meets export standards increased. Competition within Estonia has increased as processors broaden their procurement areas to increase efficiencies in their plants. The next year will be critical for the processors to reposition themselves as plant failures occur. Demand for technical information should continue to increase from both processors and producers. Land O'Lakes has gained the reputation as an excellent source of technical information. In anticipation of the project end and the increased demand for

information, Land O'Lakes put a strong end-of-project focus on insuring that its materials and methodologies were available at a number of institutions. These counterparts participated in technical assistance activities during the life of the project and are recognized by processors and producers as sources of assistance.

The evaluation noted that Land O'Lakes initiated collaboration with existing Estonian institutions early in the project to help establish linkages in support of the producers. Counterpart organizations which participated in the project were the Estonian Agricultural University at Tartu, the Estonian Veterinarian Association, the Estonian Advisors Association and the Estonian Animal Breeding Inspection Animal Recording Centre. Faculty members of the educational institutions attended training seminars held for producers and in some cases participated as co-trainers. Land O'Lakes' interactive presentation methods and materials have been integrated into courses being taught in regular classrooms and in continuing education courses. For the first time, staff of the veterinary school and the dairy institute collaborated on a training seminar.

While the first focus of the project was on production issues, Land O'Lakes designed a system approach to dairy product quality which included assistance to the processing sector. Changes in plant operations were less significant than anticipated in the project design. Two constraints which were unanticipated by Land O'Lakes limited the level of impact. First, the four target dairies were located in close geographic proximity to each other. Land O'Lakes project officer indicated that the collaboration with the processors would have been more effective had Land O'Lakes selected dairies who were located in different regions. Competition between processors precluded them from openly discussing issues in seminars where multiple plants were represented. Land O'Lakes adjusted the activities conducted by its U.S. technical experts by shortening the seminars and increasing technical assistance which addressed the needs of individual processors. Land O'Lakes had to earn the processors trust that they were not sharing strategies or plans with other processors before significant information-sharing took place. According to one plant's management and a Land O'Lakes local staff member, trust had increased to allow open communication between Land O'Lakes and themselves by the end of the project. This was evidenced by two dairies' willingness to share marketing strategies for new products to Land O'Lakes staff three months prior to product releases.

Second, the project was shortened by six months at the request of USAID/Estonia. A stronger focus on the processors was intended in 1995 after the private extension advisors were trained and less dependent on Land O'Lakes for support. Activities designed to assist the processors with sanitation within the plant, environmental issues, and marketing were dropped from the project because of the shortened project life.

Throughout the project, Land O'Lakes promoted quality improvements and efficiencies rather than trade barriers as solutions to improve performance in the competitive environment. However, Land O'Lakes supported the processors approach to the government for policy changes related to food standards. The institution of regulated raw milk standards as government policy would force milk producers to put quality controls in place on farms to meet these standards. Improvements have been made in mastitis control and some cooling equipment has been added on small operations. However, there are no standards to regulate antibiotic residues and contaminants in raw milk. Processing over capacity has allowed contaminated milk into the system as processors set their own standards. The lack of regulations has put the burden on processors to prohibit the commingling of contaminated milk with quality milk in order to meet

the European Union import standards. Overall improvements in milk quality would have been greater had the government acted on the needed change in policy.

The focus of this project was on the establishment of private advisory capacity within the dairy processors. The evaluation found that the training and technical assistance to those designated as advisors was appropriate and well received. Initially, the project relied upon local staff to manage the relationships with the processors and move the project forward. This was not totally successful as the senior management did not fully understand and support the advisors. When this was recognized, Land O'Lakes made several adjustments to the project. First, a U.S. project manager was added to the staff in Estonia to coordinate the overall goals of the project and to strengthen and maintain the relationships with senior officials and management of the processing plants. Second, the decision makers were brought to the U.S. to gain an understanding of how private advisory services can effectively support systemic improvements. However, this training took place late in the project.

Recommendations

- The approach taken by this project was the most appropriate to improve product quality with sustainable effect. Technical assistance directed at on-farm improvements was the most effective method to improve quality in the dairy system. It is recommended that this approach be implemented in future project design where similar problems exist.
- In future project designs, Land O'Lakes should consider the inclusion of a U.S. in-country project manager for at least the start-up of a project. Where the project objectives require time and financial commitments from its in-country partners, it is important to have frequent interaction with their management until the project has established enough momentum to continue. Relationship-building in this project was more effective once there was a full time U.S. advisor in Estonia.
- Support of senior management should be an early priority in any future projects. Time should be spent with the decision makers to insure that they understand the impact of the program on their operations and support the concept both functionally and financially. This can be accomplished by conducting the U.S. training for them at the beginning of the project prior to significant investment in training their staffs. In addition, Land O'Lakes needs to provide the senior management with regular feedback on the results of the project to insure their continued support.
- The impact on project outcomes of the lack of capital should be assessed when developing the project goals and measurements.
- The effect of competition on the in-country partners' willingness to participate should be assessed in determining the geographic focus of the participants.

C. Project Impact

The evaluation determined the following performance against the expected outcomes of the project:

1. Private advisory services

The goal of the project was to establish four private advisory services. The first recipient of U.S. training under the project was an Estonian veterinarian hired by Land O'Lakes to provide training and support to the processing plants' advisors. Land O'Lakes first interventions were designed to prepare a cadre of extension advisors to disseminate information to producers regarding herd management, sanitation and milk handling. All four of the collaborating dairies identified staff to work directly with farmers on herd health and milk handling issues. Of the six advisors currently on staff at the four dairy plants, two were trained at Land O'Lakes headquarters in Minnesota. The others received training from a Land O'Lakes staff advisor and technical experts from the U.S. In addition to interviewing these individuals, the evaluator met with two others who participated in the U.S. training and currently advises farmers. One of the two is a private nutrition consultant and the other is an innovative farmer who shares his experience for the improvement of the dairy industry.

The level of commitment to support the private advisors varied by processor. In two of the four plants, it was clear that the advisors will continue to work with farmers after the end of the project. In each case, the top management of the plants recognized the value of the extension work and the individuals spend between three and four days a week working directly with farmers either by phone or on farms. The third plant's extension activities were carried out primarily by the employees of the farm supply store rather than the individual trained by Land O'Lakes because he had other duties to perform which kept him from farm visits. Despite his lack of significant time for farm visits, he has written articles which have been published in local newspapers and has developed materials for distribution to producers. While this was not the expected outcome of Land O'Lakes' assistance to this dairy, the producers who supply the dairy with milk do receive the benefit of the project through obtaining this information and the newsletter prepared by Land O'Lakes. The fourth dairy evidenced the lowest corporate commitment to private extension. This dairy has experienced rapid turnover in management including the two advisors trained by Land O'Lakes. The processor is under financial stress and is unlikely to survive without outside investment in capital and management. While the individual working with farmers is committed to assisting them with milk quality, she also is responsible for the plant's testing laboratory and is able to spend only one day a week assisting farmers for whom she identifies quality problems in laboratory tests.

One dairy plant manager related an anecdote which helped to convince him that support to the producers is the most significant competitive advantage a processor can have. The plant's advisor conducts seminars for its producers on herd health and milk handling. About six months ago three large dairy producers came to the plant with flowers for the advisor to thank her for her cooperation and support. In part because of this unusual gesture the manager realized how important the advisory services are for his plant to maintain producer loyalty.

The advisors held monthly meetings to share information. During the interview process, several individuals commented that they look forward to seeing the advisors from the other processors and discussing common issues. Competition between processors did not appear to inhibit interaction between these individuals. They put high value on the opportunity to discuss problems and gain technical information together from Land O'Lakes staff and technical assistance providers.

Land O'Lakes developed and published a newsletter of technical information for producers. The articles were contributed by Land O'Lakes staff and the advisors from the plants. It will be published by the Estonian Advisory Association after Land O'Lakes leaves the country. The president of the Association was a participant in Land O'Lakes' training on private advisory services held at its headquarters in the United States. The costs of producing the newsletter will be paid by the processors and the newsletters will be distributed by their advisors.

A dairy plant manager advised that because of Land O'Lakes work with their advisors, the milk supply department is known as a place to get advice. The producers are no longer waiting for invitations but are calling directly with questions.

Recommendations

- The advisors should be trained in the U.S. as soon as practical following U.S. training for the managers and decision makers.
- The advisors should be trained to use the same recordkeeping system for farm visits which Land O'Lakes staff used for its field work. This system gives a good overview of the problems which exist, treatments recommended and improvements.

2. Improvement of sanitation on farms and in the processing plants

Land O'Lakes local staff kept records on the milk quality results on farms to whom assistance was provided. A file was kept for each farm to capture improvements over a series of farm visits by the advisors. These records tracked recommendations for improved sanitation practices, cost of recommendations, economic impact of changes and follow-up results. This tracking system was an excellent method used to capture the economic improvements resulting from changes in practices.

The evaluation found that the production performance targets were ambitious for the duration of the project and the conditions in Estonia. The evaluation was not able to measure performance against the goal that 50% of the farms would have improved sanitation. Improvement requires the combination of knowledge, desire to change and, in some cases, financial resources to implement changes. The information has been made available through Land O'Lakes' projects. The farmers evidence strong desire for technical information and recognize the value of improved sanitation. The biggest barrier to implementation of changes was lack of capital. When the milking and cooling equipment is outdated or unavailable, bacterial contamination cannot be eliminated solely by management improvements.

The advisors were well trained in milk quality issues and felt comfortable working with their producers. In interviews, the advisors were unable to identify how many producers they had provided information to directly and indirectly through the milk haulers. They stated that they worked with individual producers until problems were solved. One of the advisors stated that Land O'Lakes had provided all the information needed to make changes in on-farm practices. However, she further stated that Estonians need to prove things to themselves before they believe them and it was too soon to see the effect on farmers. Each advisor interviewed expressed the opinion that milk quality had improved and farmers' attitudes about sanitation practices were

positive. Individual farmers who have improved their practices are seeing the financial reward of higher milk quality.

After its milk haulers received training from a Land O'Lakes milk procurement specialist, one dairy plant adopted U.S. standards for milk collection where possible. The plant has replaced old aluminum milk trucks with stainless steel. The milk haulers provide information constantly to the producers since they have first communication with the producers. If there are significant problems, the haulers involve the plant advisors immediately.

The owner of a private farm credits the advisory services of a Land O'Lakes local staff person with significant improvements at his farm. Before this cooperation, people saw his farm as an example of bad farming. Most came, looked at it, and left. No one ever told him how to solve the mastitis problem. He now knows how to start treatment and when. He improved the somatic cell count of his herd from above 400 thousand to 220 thousand ppm. Within four months of assistance, his milk improved to grade "A". He also received assistance with feed analysis; ration balancing; and using records for monitoring disease and the performance of his milking operators.

One producer arranged with the plant to have his milk picked up every day instead of every other day. The bacteria count of his milk dropped from 40,000 p.p.m. to under 25,000 p.p.m. The quality of his milk improved from Grade A to the plant's elite grade which receives a premium of 40 cents over Grade A.

3. Better marketing capabilities through better quality products

Land O'Lakes fielded marketing experts to assist the dairy processors with enhancement of their marketing capabilities through marketing plans, packaging and advertising improvements and new product introductions. The processors recognized that in addition to improving milk quality, they needed to create a favorable image for their products which could be readily identified by the consumers.

One of the processors exports a significant percentage of its production through an export agreement with a European partner. The manager stated he understood that the government is not going to put on import tariffs or subsidize products. He does see that the government should have a role in normalizing relations with Russia to eliminate unfavorable trade barriers. In his view, Russia is the natural trading partner for Estonia and the best chance for increased exports of dairy products.

Another of the collaborating processors is introducing a complete line of new packages created by an Estonian advertising company. The new packages are a change from the old-style generic appearance to a series of colorful whimsical cartoon characters. Management invested in the packaging in response to competition in the market. The packages will go into production in June.

One dairy plant introduced a new soft cheese product after a year and a half of strategic planning. The product is different from any other product produced locally or imported for the Estonian market. For the introduction of this product, the dairy has developed a new package and logo. Following this roll-out, the dairy plans to change all of its packaging to the new style to have package identity in the market.

4. Strengthened capability of Estonian institutions

As noted above, Land O'Lakes placed priority on creating an infrastructure to support producers and processors during and after the end of the project. In addition to strengthening individual organizations, linkages between organizations were established where complementary skills were identified. Specific examples include the following:

- The Animal Recording Centre is using Land O'Lakes' materials to train farmers in herd health and sanitation practices. The Centre plans to add a milk quality/herd health specialist to its staff and is currently in negotiations with one of Land O'Lakes local staff members to fill this position.
- A progressive farmer who was trained by Land O'Lakes in extension techniques is applying methods learned from Land O'Lakes to his private extension work with farmers.
- An instructor at the School of Dairy Technology participated in the development of a Land O'Lakes' seminar for veterinarians and spoke to the group during the seminar. This was the first time she was able to address practicing veterinarians about her specialty, antibiotic residues in milk. She gave practical information beyond what is on antibiotic labels regarding the testing and segregation of treated cows. She also uses Land O'Lakes' materials in her classroom.
- A former University lecturer/researcher is working as a private nutrition consultant to farmers. He has incorporated skills and technical information learned from Land O'Lakes into his presentations to farmers and credits Land O'Lakes with giving him a useful ration balancing program.
- Through its work with farmers, the field staff of the Estonia Animal Recording Centre in Tartu receive requests for information on mastitis and milk handling. Two dairy plants which are not direct collaborators with Land O'Lakes, requested training from the Centre's nutrition expert. Two sessions, attended by a total of 55 farmers, were conducted using Land O'Lakes' materials. The dairies paid for the materials and sites for the training.
- The dean of the School of Dairy Technology is planning the school's 35th anniversary event in August. He expects that 100-200 past graduates, who are now working for dairies, will be in attendance. The conference will focus on practical technical information using the interactive methods of presenting materials learned from.
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- The Director and bookkeeper of the Estonia Animal Recording Centre in Tartu attended a Land O'Lakes' course on financial management. After learning the concept of aging receivables in the course, they adjusted their collection processes to discontinue testing for producers who had not paid for one year. As a result, they collected 30,000 EEK in fees which had been written off in past years. The Director stated that this indicates the farmers' understanding of the importance of using the production results as a management tool on their farms.
- The Dean of the Veterinary Faculty at the Estonian Agricultural University is a specialist in mastitis. He stated that Estonian veterinarians have been trying for years to introduce the same procedures the U.S. experts advocated in a seminar conducted for veterinarians and working with Estonian farmers. The U.S. experts validated what the Estonian veterinarians were saying and now the farmers will listen to their advice.

- The Veterinary Faculty, the School of Dairy Technology, the Director of the Animal Recording Centre, and others participated with a U.S. veterinarian in a seminar held for 70 veterinarians from all parts of Estonia. The participants paid for their own lodging and transportation to attend the seminar.

D. Monitoring and Evaluation Systems

Land O'Lakes implements its projects with cross-functional teams. Each individual on the team has a specific role in addition to participating in overall decision-making. A team meeting is held monthly with in-country project staff available by conference call to discuss progress on the program and plan upcoming activities. This has proven to be an excellent coordination tool to insure that all team members are working efficiently toward the same goals.

USAID/Washington and USAID/Estonia received periodic updates on the project from both local and U.S. staff. The quarterly and financial reports were complete and were submitted on a timely basis. The USAID/Estonia project officer visited project sites with local staff frequently and was very familiar with the project and its primary beneficiaries. She was included in all major planning sessions. The USAID representative was informed about the project through meetings with Land O'Lakes staff and the project officer's updates.

In the early stages of the project, the local staff focused on providing direct information to producers and monitoring improvements on-farm. While the staff technical advisor received excellent training during her six weeks in the United States, it was not of sufficient duration to effectively lead the project. Land O'Lakes added a U.S. project manager in Estonia to insure that the U.S. perspective was brought into all technical interventions.

Land O'Lakes has an effective internal evaluation system which has been used for the Estonia project. The key components of the process are 1) a logical framework which is revised periodically as conditions change, 2) formal follow-up interviews with recipients three months following the activity, and 3) impact interview six months following the activity. In addition, project field staff forward monthly progress reports to Land O'Lakes' headquarters which provided updates on activities and project impact.

The Regional Manager based in Warsaw was responsible for in-country oversight of the project. He traveled to Estonia quarterly for the purposes of monitoring progress through staff meetings and conducting evaluation interviews with recipients and collaborators. His reports were forwarded to Land O'Lakes' headquarters in the U.S. and USAID/Estonia. These reports documented significant changes in the industry, comments from recipients and collaborators on the project, and impact stories gathered during the interviews.

Recommendation

- Land O'Lakes should conduct a workshop for the project team at the beginning of each project to review the underlying documents of the project such as the proposal, the agreement, the logical framework and the budget. All team members, including in-country staff, should review the evaluation process and the key measurements for progress reports. As new team members are added, they should have a formal session to become familiar with the evaluation process and the contents of these documents.

E. Actions taken on recommendations of mid-term evaluation

The mid-term evaluation recommended a number of actions be taken to strengthen Land O'Lakes' international development program. Design and implementation and design of the Estonia project responded to recommendations incorporated in the evaluation.

1. Development strategy

The mid-term evaluation recommended that Land O'Lakes refocus its program on specific agribusiness problems, concentrate in one or more regions in each country, and rely more heavily on technical assistance than training. Further, the recommendation was that Land O'Lakes develop a development strategy, implementation plan, and results-based performance criteria for measuring project success.

The country-specific design of the project in Estonia incorporated the key elements of this recommendation. As noted above, both producers and processors in Estonia agreed that improvement of raw milk quality was the number one priority of the industry. The project focused its efforts in one geographic area of Estonia. This, however, contributed to a slow commitment to the program because of competition between plants. Finally, the majority of the interventions conducted by the Land O'Lakes project staff and U.S. technical experts concentrated on technical assistance to the producers and processors.

2. Training courses

The mid-term evaluation recommended that Land O'Lakes discontinue generic courses since the groundwork has been laid for customized training approaches utilizing local trainers and institutions. Further, the recommendation suggested that Land O'Lakes develop case studies and examples which fit the country and incorporate the courses within private agribusinesses to create extension services and connections between farmers and processing facilities.

The project emphasized formal training sessions be no longer than a few days in duration. According to participants interviewed, the training sessions which were conducted were responsive to local conditions. The evaluation found that in a couple of cases U.S. trainers made recommendations which, although appropriate to the conditions, could not be implemented at that time because of insufficient capital. However, even in these cases, the information was valued by the recipients because it provided a framework for future decisions when capital becomes available with reasonable terms.

3. Technical assistance

The mid-term evaluation recommended that Land O'Lakes shift from a training approach to a technical assistance based development model. The evaluation further recommended technical assistance be conducted by two-person teams when possible, one U.S. advisor and one local counterpart. The combination of training and follow-on technical assistance in each intervention was recommended.

The project design specified long term and short term technical assistance for the majority of the interventions. Two Estonians with individual specialties in production and processing were hired as long term staff for the project. In addition to providing continuous assistance to producers and

processors, they participated in every intervention conducted by U.S. advisors. Their cooperation with the U.S. advisors helped them apply their knowledge to local conditions. In addition, these interactions strengthened the technical knowledge of the local staff thus creating skilled capacity to provide assistance in the absence of U.S. support.

Land O'Lakes adjusted its model to provide short training seminars of two - to three-day duration followed by targeted technical assistance to the four cooperating processors and their producers. As the project progressed, the approach shifted to total technical assistance as Land O'Lakes responded to specific needs of the beneficiaries.

4. Evaluation and monitoring systems

The mid-term evaluation recommended that Land O'Lakes adopt a post-training and technical assistance evaluation system. This system would require a scheduled formal interview process with local participants, partner companies and institutions. The evaluation further recommended that Land O'Lakes develop simplified logical frameworks for each of its primary beneficiaries.

Land O'Lakes established a formal evaluation system in Estonia. The Regional Manager based in Warsaw and responsible for in-country oversight of the project, traveled to Estonia quarterly. His purposes for travel included monitoring progress through staff meetings and conducting evaluation interviews with recipients and collaborators. Quarterly evaluation reports were prepared and submitted to Land O'Lakes in the U.S. and USAID/Estonia. These reports documented significant changes in the industry, comments from recipients and collaborators on the project and impact stories gathered during the interviews.

A logical framework for the project in total was developed and monitored during the life of the project. Logframes for individual organizations were not developed. However, records were prepared following each farm visit to track information shared, changes made as a result of the advice, investment required to implement the changes and the economic impact of the change. The reports were kept in continuous files for each producer to whom advice was provided. Monthly meetings were held with the advisors to share information and encourage them to work together to solve common problems.

V. Lessons learned

A. *The role of competition*

Successful participation in a newly created free-market requires organizations to understand what competition is, who their competitors are, and how to work within the marketplace. The negatives of competition are learned first. The initial response to a lack of order in the industry generally includes distrust of all perceived competitors. However, there are times when positive collaborative efforts with competitors are appropriate. Examples of such collaboration include uniting as an industry to support government reforms, utilizing their trade association to promote products generically, and uniformly requiring the same standards from suppliers. All of these collaborative efforts support the ability of the domestic sector to compete against foreign marketers. Until the power of a united industry is learned, the local sector is not taking full advantage of its strength in meeting external competition through quality reforms. This healthy

dimension of cooperating with competition must be taught along with other skills. Technical assistance to trade association should facilitate this collaborative process.

B. Lack of credit

The lack of affordable credit in production agriculture is a significant barrier to total quality improvements. To maximize raw product quality, producers must have access to funds for inputs, proper storage and handling equipment, and replacement stock. While a number of quality constraints can be addressed through technical changes, deterioration of raw product quality will occur without proper storage prior to processing. The most effective approach to address all quality constraints is to incorporate access to small amounts of capital into a technical assistance project or have access to funds through a parallel lending program.

APPENDIX A
SCOPE OF WORK

SCOPE OF WORK
FINAL INTERNAL EVALUATION
ESTONIA DAIRY IMPROVEMENT THROUGH PRIVATE EXTENSION

I. Activity to be evaluated

The activity reviewed under this final evaluation is the Estonia Dairy Improvement through Private Extension project. This is a country-specific component of a regional grant provided to Land O'Lakes, Inc. by the Bureau for Europe and the Newly Independent States of the United States Agency for International Development. The regional grant, EUR-0024-G-00-1072-00, is entitled "Agricultural Cooperative Business Development and Training in Central and Eastern Europe. Initially approved in the amount of \$4,000,000 in 1991, it has been amended twice for a total of \$13,000,000 in funding. The activities covered by this evaluation were implemented January, 1994 to the present with program costs of approximately \$490,411. The project completion date for the Estonia activities under this grant is May 31, 1995.

II. Purpose of the evaluation

The purpose of this final evaluation is to assess the extent to which Land O'Lakes has achieved the objectives of the Estonia Dairy Improvement project. The project goal is to assist the Estonian private dairy industry to better compete within the evolving free market place. Outputs of the project design include the establishment of model private extension services, improvement of sanitation on farms and in plants, better marketing capability through better quality products, and strengthened capability of Estonian institutions.

The final evaluation is intended to provide USAID and Land O'Lakes with quantifiable evidence of the project's impact on the Estonian dairy industry, feedback on the success of the project methodology, recommendations for follow-on activities, and lessons learned which can be incorporated into follow-on and future project design.

III. Project Background

Land O'Lakes, Inc. is an agricultural supply, food processing and marketing cooperative founded in 1921. It is currently owned by 300,000 farmers and ranchers in 15 states in the upper midwestern and western United States. Land O'Lakes provides a full line of services to its members. It supplies farm inputs such as feed, seed, fertilizer, chemicals and petroleum for members' crops and livestock to its 1,200 local cooperative business members. Land O'Lakes procures milk from its dairy members and produces over 600 dairy-based products for the consumer and food service markets.

Since 1981, Land O'Lakes has been actively engaged in economic development activities internationally. This involvement represents Land O'Lakes commitment to assisting private sector organizations to develop the means to improve their economic conditions.

Land O'Lakes adapts its experience, knowledge, and expertise to strengthen private sector cooperatives and other agribusinesses which serve farmers. To implement its activities, Land O'Lakes draws on its farm-to-market system with over 6,000 employees and 300,000 members. Land O'Lakes has implemented development activities in over 30 countries worldwide.

Land O'Lakes began its development activities in Estonia through a rapid needs assessment in December, 1991. From January, 1992, through September, 1993, Land O'Lakes conducted training workshops and technical assistance in dairy production, cooperative principles and practices, and procurement and assembly of milk to a broad audience in the dairy sector. In September, 1993, the project was evaluated with the dual objectives of assessing project impact and focusing ensuing project activities on problems and constraints specific to Estonia's dairy industry.

To achieve the outputs identified in section II. above, Land O'Lakes has collaborated with four major dairies located at Paide, Polva, Tartu and Viljandi in southern Estonia. The dairies provide access to their advisors for training and serve as a conduits to the 3,000+ private farmers in the region. The project has also collaborated with the Estonian DHIA and the Agricultural University of Tartu to further disseminate training and information.

IV. Statement of Work

The evaluator will spend five days in the field in Estonia to assess the project. Prior to departure, the evaluator will review the obligating document, logframe, implementation plans and technical assistance providers' reports. In addition, the sections which pertain to activities in Estonia of the quarterly and annual reports on the regional grant will be reviewed.

The evaluator's shall provide a report which includes the following: a) assesses the appropriateness of the assistance design; b) identifies successful activities or accomplishments resulting from Land O'Lakes' development approach in Estonia; c) reviews the monitoring and evaluation systems utilized by Land O'Lakes; d) assesses Land O'Lakes management and effectiveness; and e) identifies lessons learned by Land O'Lakes as the result of implementation of the project.

The report shall provide an examination of the issues by answering the following questions:

a.) Project design:

- To what extent did dairy policy support or inhibit the project from meeting its objectives?
- Were the counterpart organizations identified appropriate to the expected outcomes?
- What criteria were used to identify the target beneficiaries?

- Were the identified beneficiaries capable of meeting the project outcomes?
- Did the project have the appropriate mix of long term and short term technical assistance?
- Were the assumptions, constraints and performance indicators appropriate to the environment in the Estonian dairy sector?

b.) Project impact:

- What was the progress of the project in respect to its scope of work described in the project design, implementation plan, logframe and projected outputs for the life of the project?
- How effective and appropriate was the training and technical assistance to the goal of increasing competition in the Estonian dairy sector?
- What specific measurable improvements have resulted from the project?
- Has the information provided been disseminated to secondary beneficiaries? What has been the impact of this?
- Have the skills and knowledge presented by the technical advisors been institutionalized?
- Is there support within the dairies to sustain the private extension services after the project ends?
- Have there been unanticipated benefits as the result of the program activities?

c.) Monitoring and evaluation

- What controls are in place to monitor progress under the project?
- Has the level of backstopping provided to the project by home office staff and USAID been sufficient and appropriate?
- What adjustments has Land O'Lakes made in the project as the result of external issues and constraints or changing assumptions?
- What methods has Land O'Lakes utilized to obtain feedback on the success of its interventions in achieving the goal and purpose of the project?

d.) Project management

- Assess the financial procedures, management, administrative functions of the project staff.
- How successful was the staff in its coordination with USAID field and Washington staff?

e.) Lessons learned

- What has been learned through this project which will assist Land O'Lakes and/or USAID in future project design?

The evaluation report will provide findings to answer these questions, conclusions that are based on the findings, and recommendations based on an assessment of the results of the evaluation. The report will also provide lessons learned.

V. Methods and procedures

The evaluation methodology will include:

- Review of project documents including USAID agreement, preceding evaluation, technical assistance providers' reports, quarterly reports in the project, logframe.
- One-on-one interviews with key home office staff to review project documentation.
- Interviews with U.S. providers of short term technical assistance.
- Selection of interviews with key in-country beneficiary organizations and farmers.
- Interviews with Land O'Lakes field staff and review of in-country evaluations and evaluations methodologies.
- Meetings with key collaborators, important country contacts.
- Meetings with USAID staff to gain insight in to USAID priorities and to present preliminary findings.
- Preparation of an evaluation report for USAID/Washington and USAID/Estonia representative.

Prior to conducting field work, the evaluator will spend two days in Minneapolis reviewing documents and two days conducting interviews with U.S. staff and technical assistance advisors. The evaluator will spend five days in Estonia conducting field work. Work on Saturday is authorized, if necessary. However, evaluator will not be compensated for weekend work. The evaluator will be accompanied by a translator during the field interviews.

The proposed schedule for the evaluation is as follows:

May 4-5	Document review in Minneapolis
May 9-10	Interview U.S. staff and technical assistance providers
May 22-26	Field work in Estonia
June 12	Draft report to USAID

VI. Evaluation team

The evaluation will be conducted by a Land O'Lakes U.S. staff person accompanied by an individual from USAID/Estonia. The Land O'Lakes staff person participated in the evaluation of the regional grant conducted in September, 1993, during which the Estonia project was designed.

VII. Funding

Funding for the evaluation will be provided under USAID grant number EUR-0024-G-00-1072-00. The proposed budget is as follows:

Evaluator salary	15 days at \$267/day	\$4,005
Fringe benefits	15 days at \$93/day	1,395
Airfare	Minneapolis-Tallinn-Minneapolis	2,000
Per diem	Six days at \$129/day	774
Interpreter	Six days at \$80/day	480
Transport		<u>150</u>
TOTAL DIRECT COSTS		\$8,804
INDIRECT COSTS AT 37%		<u>3,257</u>
TOTAL BUDGET		<u>\$12,061</u>

APPENDIX B
DOCUMENTS REVIEWED

Documents Reviewed

Estonian Dairy Improvement Through Private Extension Proposal submitted to USAID in October, 1993

Grant Agreement No. EUR-0024-G-00-1072-00

Land O'Lakes 1995 Workplan and Closeout plan

Mid-Term Evaluation - AID-Funded Programs in Central and Eastern Europe, Grant No. EUR-0024-G-00-1072-00 dated September, 1993

Land O'Lakes Quarterly Report, October 1-December 31, 1993

Land O'Lakes Annual Report, October 1, 1993 - September 30, 1994

Land O'Lakes Quarterly Report, January 1 - March 31, 1994

Land O'Lakes Quarterly Report, April 1 - June 30, 1994

Land O'Lakes Quarterly Report, July 1 - September 30, 1994

Land O'Lakes Quarterly Report, October 1 - December 31, 1994

Land O'Lakes Quarterly Report, January 1-March 31, 1995

Partner Selection Study Team Report dated January 25, 1994

Technical Assistance Report, March 25 - April 2, 1994, James Glaeser

Technical Assistance Report, September 23 - October 7, 1994, Mike Rasmussen

Technical Assistance Report, November 20 - December 1, 1994, Joel Stangeland

Technical Assistance Report, October 16 - 27, 1994, Gary Seiler

Trip Report on Annual Business Plan Workshop, September, 1994, Susan Johnson

Project Logical Framework dated April 12, 1995

Estonia Trip Report, James Bueltel dated January 23, 1995

Technical Assistance Report, February 24 - March 11, 1995, Dr. Jack Bouffard

APPENDIX C
INTERVIEWS CONDUCTED

Evaluation Interviews Conducted

Interviews in the United States

Cheryl Yasis, Land O'Lakes Project Officer

Rolf Campbell, Land O'Lakes Director of Operations

Ken Schamberger, Land O'Lakes Program Specialist

James Glaeser, Land O'Lakes Milk Procurement Manager

Susan Johnson, Land O'Lakes Project Assistant

Joel Stangeland, Land O'Lakes Quality Assurance Manager

Dr. Jack Bouffard, DVM, Technical Assistance Provider

Interviews In Estonia

Adrian de Graffenreid, USAID Representative to Estonia

Marika Tomberg, Project Development Specialist, USAID/Estonia

David Ligda, Land O'Lakes Project Leader

John MacKillop, Land O'Lakes Project Leader

Ruve Sank, Vice Chancellor, Ministry of Agriculture of Estonia

Tiina Vares, Director, Animal Recording Centre, Estonian Animal Breeding Inspection

Ilma Joudu, Chief of Laboratory, Tartu Piim

Marika Hellat, Advisor, Polva Piim Ltd.

Ahto Pajoma, Head of Supply Department, Paide Piim

Aime Pung, Advisor, Paide Piim

Anu Toom, Advisor, Paide Piim

Lauri Kallaste, Consultant, Mulgi Meier Union Ltd.

Arvo Veidenberg, Farmer and Member of the Board of Directors of Mulgi Meier Union Ltd.

Jaak Timusk, Commercial Manager, Mulgi Meier Union Ltd.

Indrek Laur, Agricultural Supply Store Manager, Mulgi Meier Union Ltd.

Enn Sokk, Managing Director, Polva Piim Ltd.

Madis Aidnik, DVM, Dean of the Veterinary Faculty, Estonian Agricultural University

Jana Parn, Instructor, School of Dairy Technology

Dean, School of Dairy Technology

Andres Hellenurme, Private Advisor, U.S. Training Participant

Avo Samaruutel, Private Farmer, U.S. Training Participant

Jaan Kaar, Managing Director, Paide Piim and Director, Estonian Dairy Association

Land O'Lakes, Inc.

Henno Janson, Land O'Lakes Communications Specialist

Nelly Oinus, Land O'Lakes Technical Specialist

James Bueltel, Land O'Lakes Regional Manager